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**BEFORE THE**

**AIR AND LAND FORCES SUBCOMMITTEE**
**AND**

**SEAPOWER AND EXPEDITIONARY FORCES SUBCOMMITTEE**

**HOUSE ARMED SERVICES COMMITTEE**

**UNITED STATES HOUSE OF REPRESENTATIVES**

**ON THE ARMY FORCE PROTECTION PROGRAMS**

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Chairman Abercrombie, Chairman Taylor, Congressman Bartlett, Congressman Akin and distinguished members of the committee: On behalf of the Army, thank you for the opportunity to appear before you today to discuss programmatic updates in Army force protection. We recognize that today's dangerous and uncertain strategic environment demands that our units are maintained at a high state of combat readiness, and that deployed forces should have the best capabilities our Nation can offer. As you know, the Army is steadfast in its transformation into one that is best prepared to operate across the full spectrum of conflict, with a focus on asymmetric and irregular warfare. This effort includes Army modernization, modular conversion and implementation of our Army Force Generation (ARFORGEN) process, all designed to rebalance forces across the Active and Reserve Components to provide trained and ready forces for continuous operations. The changed character of warfare has greatly affected our armed services but the Army's top priority remains unchanged, the protection of America's Soldiers. We want to thank the committee for its shared commitment to this goal.

We are in an era of persistent conflict, a long term engagement of high operational demand that makes clear that we must increase our strategic depth, improve readiness and reduce our strategic risk. We are at a critical point in generating Army forces to meet current and future operational requirements. We remain engaged with an adaptive enemy who continuously seeks to develop new methods to attack our Soldiers and exploit our vulnerabilities. As you know, this battlefield has no front lines and poses threats throughout the entire operational area. Aware of this threat, we have adapted our institutional processes to expedite the latest force protection equipment to our deployed forces whether they are combat brigades or sustainment forces. We recognize that this enemy is highly adaptive and we have established systems, enabled by your funding and support, to responsibly procure equipment and promising technologies at an ever increasing pace.

The Army's commitment to implementing our national security strategy and defend our nation is firm with your support. We will continue to provide our Nation, the President, the Secretary of Defense, and the combatant commanders with a unique set of core competencies and capabilities. We remain dedicated to training and equipping our Soldiers and growing leaders. Our Soldiers continue to perform heroically on the

battlefields of Iraq and Afghanistan. We are ever cognizant of the hardships that they endure to safeguard our Nation. Protecting them while they conduct this perilous mission remains our highest priority. We know the importance of each and every Soldier to our Nation, the Army and their Families, and the loss or injury of anyone is a tragedy that we work tirelessly to prevent. Your continued funding and support have enabled dramatic and historic force protection improvements to better safeguard our greatest asset, the American Soldier. Thank you for your ceaseless efforts; they are saving lives every day. We will continue to deliver relevant and ready land power, enabling combatant commanders and the joint force to implement our National Defense Strategy. Simultaneously executing wars in Iraq and Afghanistan, implementing our modularity and transformation initiatives and resetting the force remain a challenge. However, each provides an opportunity to reshape our Army for the future.

Before we delve into specific programs, it is important that you have some understanding of how we view force protection. The Army's framework for force protection is a system-of-systems approach that integrates layers of protection for our Soldiers. The layers begin at the individual level, followed by the vehicle platform, countermeasures (CM), situational awareness (SA), and lethality. Force protection starts with individual equipment, such as the advanced combat helmet, ballistic eyewear, hearing protection, night vision devices, fire resistant uniforms, and Interceptor body armor with enhanced small arms protective inserts, deltoid auxiliary protectors, and side armor plates. The next layer of protection incorporates the use of armored vehicles such as the up-armored HMMWV (UAH) with fragmentation protection kits, the armored security vehicle (ASV), the XM153 Common Remotely Operated Weapon Station (CROWS) and the Mine Resistant Ambush Protected Vehicle (MRAP). Protection is further layered through the use of passive and active counter-measures like Counter Radio Controlled IED Electronic Warfare (CREW) devices and Counter Rocket, Mortar (C-RAM) equipment, and route clearance equipment such as the Buffalo, the Husky, the RG-31, and the Cougar. To provide our Soldiers the ability to maintain enhanced situational awareness on the battlefield, protection is layered even further through the use of tactical unmanned aerial vehicles like the Raven, the Base Expeditionary Targeting and Surveillance System of Systems – Combined (BETSS-C) and innovative solutions such as Task Force ODIN (Observe Detect Identify and

Neutralize). The Army makes use of these intelligence gathering efforts and surveillance systems to enable our Soldiers to have the best understanding of the battlefield to increase lethality and survivability. Finally, these layers of Soldier protection are integrated through the development of appropriate tactics, techniques, and procedures (TTPs), based on lessons learned which are rehearsed through realistic training. Our commanders and Soldiers in theater not only rely on equipment and armor protection, but realize that force protection requires the integration and application of all of these capabilities to reduce vulnerability to attacks in an asymmetric threat environment.

The enemy continually works to identify and exploit our vulnerabilities. Our challenge is to identify and then address these efforts through a combination of TTPs and materiel changes. Since our last update to the committee in January 2007, the Army continues to make substantial progress to stay ahead of this adaptive enemy. We have made major improvements in the system-of-systems we employ to protect the lives of our service members as well as our processes for developing and fielding this equipment. Together with the Marine Corps we have largely fielded an entirely new family of vehicles providing enhanced crew protection, the Mine Resistant Ambush Protection vehicle (MRAP). We have also developed and fielded numerous new or upgraded countermeasure systems and surveillance systems, and we have fully matured the Rapid Fielding Initiative (RFI), providing an increasing array of state-of-the-art small unit and individual protection equipment to over 196,000 deploying Soldiers in FY2008 alone. The current RFI equipment list consists of 73 items to meet the requirements of our Soldiers to fight and win in the dynamic environment of full spectrum operations. Originally scheduled to be completed by the end of FY07, the RFI program has been so successful that it has been extended indefinitely to continue to provide support for ongoing operations. As demonstrated by our use of lessons learned and Operational Needs Statements, we are constantly seeking methods to improve each layer of force protection.

The U.S. Army Rapid Equipping Force (REF) continues to provide timely solutions for commander's operational requirements. The mission of the REF is to rapidly provide capabilities to Army forces employed globally through current and emerging technologies in order to improve operational effectiveness. The REF receives

warfighter requirements for a capability gap through direct communication and feedback from the warfighter. In some cases, projects are generated from requirement documents such as ONS and Joint Urgent Operational Needs Statement (JUONS). The REF reviews each request for supportability and vets potential projects with Army Labs, Program Managers (PMs), and Program Executive Offices (PEOs) to avoid accidental duplication of effort and to maximize partnership opportunities. REF projects can become an Acquisition Program under the Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA (ALT)) management when substantiated by an approved ONS or JUONS.

We would like to provide you an update on our ongoing efforts to improve Soldier force protection. In addition to advances with combat helmet, night vision goggles, and the M4 carbine, the Army provides every Soldier in theater with Interceptor Body Armor (IBA). IBA remains a centerpiece program for the Army; it saves lives every day. IBA is a modular design that provides protection against fragmentation and small arms ammunition. The current Army body armor (Improved Outer Tactical Vest (IOTV) equipped with Enhanced Small Arms Protective Inserts (ESAPI) plates) provided to Soldiers meets operational requirements and is proven both in rigorous testing and in combat to be the best body armor in the world. Since the inception of the U.S. Army's Body Armor program, the commercial marketplace has been afforded the opportunity, in full and open competition, to demonstrate their body armor products to the U.S. Army. Extensive testing of all body armor products provided to the Army has shown there is nothing more effective on the market today than the Army's Interceptor Body Armor. The Army has continually improved its body armor over time. The current IOTV has three primary improvements: a quick release, less weight and more area coverage than the OTV. The quick release allows removal of the body armor in case of an emergency, to avert drowning or allowing medical personnel quick access to an injured Soldier. In seeking the next generation of body armor, the Army continually collaborates with the industrial base for technology to meet Army requirements. The Army provides industry with the opportunities to show and demonstrate their products. For example, the Army sponsors open industry days and holds Soldier Protection Demonstrations to allow industrial base vendors to demonstrate their body armor products.

The Army will procure 120,000 sets of X-Small Arms Protective Inserts (XSAPI) plates in 2009. These plates will be shipped to Kuwait as a contingency stock, available for use by the theater commander. Although XSAPI provides increased protection, it does not meet the Army standard of providing increased protection at a lighter weight. In fact, it is heavier than the current ESAPI. The vast majority of requests from commanders in the field, especially those in Afghanistan, ask equippers to lighten the Soldier load. Therefore, commanders in the field have the option of drawing the heavier XSAPI plates from Theater-sustained contingency stocks or retaining the lighter, and very capable, ESAPI already fielded.

Another critical component of protection for Soldiers is the Fire Resistant Environmental Ensemble (FREE), a multi-layered versatile, all climate system that allows Combat Vehicle and Air Crew members to adapt to varying mission requirements and environmental conditions. The system consists of: male and female undergarments; base layer; mid-weight under layer; light weather outer layer; intermediate weather outer layer; cold weather gloves; extreme/wet weather layer; rigger belt, and wool socks. FREE is designed to be functional in and out of aircraft and combat vehicles. It will replace legacy aviation and combat vehicle crewman cold-weather clothing. It is designed to increase comfort and ergonomic efficiency for wear in the confines of aircraft and armored vehicles.

Since 2003, every Soldier in OIF and OEF has an Advanced Combat Helmets (ACH) prior to deployment through the Rapid Fielding Initiative. Currently the ACH is in 70% of all units across the Active Army and Reserve Component. The ACH provides our Soldiers with increased bullet and impact protection, better equipment compatibility, greater situational awareness, and weight reduction over the PASGT helmet. The Army is developing the next-generation combat helmet. The objective of this project is to develop a helmet that provides 7.62mm bullet protection with a minimum or no weight increase from the ACH.

The requirements, procurement testing and evaluation communities and the industrial base have done a fantastic job to meet the needs of the war fighter. In the last 15 months the Army has delivered over 10,200 MRAP vehicles to Iraq and Afghanistan of which nearly 9,000 are in operational use by the warfighter. During that

time, we received insightful assessments from Commanders and Soldiers regarding MRAP performance & capabilities and recommended improvements. Our industry partners have challenged the limits of technology, pursuant to our requirements, and evolved MRAPs from providing IED protection, to providing IED and Explosive Formed Projectile (EFP) protection, to becoming a smaller, lighter, more maneuverable IED/EFP protected vehicle. The next evolution of MRAP is the MRAP-All Terrain Vehicle (M-ATV). A Request for Procurement (RFP) was released in Dec 08 and evaluation of vendor proposals is underway. Theater operational requirements have nearly been met and efforts are underway to begin retrograding older/less capable MRAP to CONUS for Pre-Deployment and Home Station Training. We anticipate shipment of retrograded vehicles to begin in March 09. One of the Army's equipping tenets that we constantly strive to achieve is providing our Soldiers with the best available equipment and capabilities that technology will allow. To this end, MRAPs are a resounding success. We recently received a classified report that underscored the effectiveness of the Mine Resistant Ambush Protection vehicle. It was overwhelmingly clear that this family of vehicles has dramatically enhanced survivability for Soldiers involved in IED and EFP engagements. Without question, MRAPs are saving Soldier's lives and in many cases are allowing our Soldiers to walk away unharmed from horrendous explosions. Again I would like to thank this committee for your support for this vital program.

We are continuing to send Up-Armored HMMWV's into theater. This is not only to meet the combatant commander's requirement of 19,645, but also includes replacements for battle losses and worn out vehicles. We have 17,450 on hand or 89% of the operational requirement. Additionally, we are upgrading the vehicles' ability to protect our Soldiers. Initiatives such as Fragmentation Kits 6 and 7 are being procured for installation on UAHs to counter IED and sniper attacks. At the same time we are investing in a myriad of technologies that will increase the platforms capabilities to engage the enemy. Systems such as Acoustic sniper detection systems (Boomerang), Remote Weapons Stations (RWS), Long Range Advanced Scout Surveillance System (LRAS3) are all intended to increase the ability of our Soldiers to identify and engage the enemy.

In other areas of our Tactical Wheeled Vehicle (TWV) fleets, we are also increasing Soldier protection levels. In the next few months, we will be fielding the first of over six thousand medium vehicles built in line with our Long Term Protective Strategy (LTPS). These cabs will be capable of easily accepting armor kits that provide better protection when needed and allow for removal of the kits when the protection is not needed. In coordination with Combined Arms Support Command (CASCOM), the Headquarters, the Department of the Army G-3 is working to finalize the Long Term Protective Strategy in order to ensure that the TWV fleet armoring requirements reflect the latest lessons learned from the current operational environment. Long Term Armoring Strategy (LTAS) trucks are being fielded to next deploying units in order to ensure that soldiers receive the newest trucks, with the most capable armor protection, during their deployment to the CENTCOM Area of Operations (AOR). Older trucks are being moved to repair facilities to be reset for reuse within the force in order to ensure Soldiers are equipped to train as they fight.

To further protect gunners while still enabling them to engage the enemy with their crew-served weapons, the Army is also fielding the XM153 CROWS. CROWS is a remote weapon station capable of mounting either the M2, MK19, M240B or M249 Machine Gun. It provides the operator with the ability to control the system from within the protection of the armored vehicle and to engage targets with a high degree of accuracy during the day and at night while stationary or moving. The system provides increased lethality and survivability and is considered a force multiplier. Fielding is ongoing in Iraq for the RG-31, Buffalo, and RG-33SV (SOCOM), JERRV and M1151A1 UMR. MRAP integration and testing are ongoing on the Dash and RG31A2 MRAP vehicles in support of OEF. The first vehicles for OEF with CROWS are planned to be shipped on or about 7 March 09 with a planned fielding date of May 1, 2009.

The Army has continued to support both OIF and OEF with Counter Radio Controlled IED Electronic Warfare (CREW) jammers. Current funding and production support the current Joint Urgent Operational Needs Statement (JUONS). 98% of all armored vehicles in OIF have CREW installed. This gives Commanders the flexibility to ensure all vehicles that leave the FOBs have electronic protection.

OEF is currently receiving more jammers to support the deployment of additional units and equipment. Additionally, all MRAPs have had CREW jammers integrated stateside before deployment. The Army has devised strategies to keep their current fleet of jammers relevant against a constantly evolving threat. The Army is fielding an upgrade to the Duke CREW system that will add capability to stay ahead of this evolving threat. The Army firmly believes that the success of the CREW program has led to a drastic reduction in the Radio Controlled IED (RCIED) threat.

Surveillance is vital to commanders' ability to provide Force Protection on the battlefield. Task Force (TF) ODIN (Observe, Detect, Identify, and Neutralize) is an Army Aviation Battalion specifically designed for conducting Reconnaissance, Surveillance, Targeting and Acquisition (RSTA) missions in support of operations in OIF and OEF. TF ODIN is an innovative combination of manned and unmanned aerial platforms, equipped with the latest array of sensing devices and full motion video, which is coupled with a dedicated intelligence support team. This powerful combination can provide direct support to brigade combat teams to enable them to get ahead of the bang on the counter IED fight, which is a great example of a creative combination of integrating existing capabilities to deliver state of the art results.

To improve the force protection posture of our operating bases in Iraq and Afghanistan, the Army is fielding the Base Expeditionary Targeting and Surveillance Systems – Combined (BETTS-C) to improve local surveillance. BETSS-C consists of four major subsystems: Rapid Aerostat Initial Deployment (RAID), Cerberus, Force Protection Suite (FPS), and Rapid Deployment Integrated Surveillance System (RDISS). This combination of surveillance systems greatly improves situational awareness, contributes to better employment of forces, and acts as a deterrent to enemy forces. The currently validated requirements are for support of 472 locations throughout OIF and OEF. Currently, fielding is in progress in both OIF and OEF. To date BETSS-C has been fielded to 34 OIF locations and 65 OEF locations. Fielding continues at rates of 9-12 OIF locations per month and 13 OEF locations per month. OEF has also requested additional trainer/operator personnel to augment some of their smaller operating bases. These personnel are currently being trained and will begin to deploy to the theater in March 09. BETSS-C requirements are currently being

reviewed and re-validated by CENTCOM. There is an expectation that requirements will increase within the OEF Area of Responsibility, and remain stable or decrease within the OIF Area of Responsibility. CENTCOM expects to provide their review in early February 2009.

The enemy continues to evolve their tactics, techniques and procedures. To meet the changing threat the Army has reacted with the Armor technologies discussed earlier, but has also taken aggressive steps to get "Left of the Bang." One area we have focused is in the Route Clearance Packages sent to theater. These packages consist of teams travelling in specialized armored vehicles and are designed to sweep routes to locate and neutralize IEDs before they can engage our Soldiers. As the threat has changed the Army has responded by increasing the force protection levels of the vehicles through the use of spall liners, bar/slat armor. These vehicles have proven to be highly effective due to their V-shaped hulls, high stand-off and armor body provide for excellent protection. Since February 2008, the army procured enough vehicles to field an additional 30 Route Clearance Teams. The success of this strategy is evident in the results. In December alone, over 2,500 miles of road were swept, with only 2 WIA

In June 2007, the Vice Chief of Staff of the Army directed PEO Soldier to field helmet sensors (HS) to two Brigade Combat Teams (BCT). The HS is an unobtrusive data collection system mounted to the Advanced Combat Helmet or Combat Vehicle Crewman helmet. It measures acceleration and pressure on the helmet associated with concussive events (blast and impact attack incidents) that a Soldier may experience in Theater. There are almost 7,000 sensors currently in operation with the 4$^{th}$ BCT of 101$^{st}$ Air Assault Division (OEF) and the 1$^{st}$ BCT of 4$^{th}$ Infantry Division (OIF). The HS data from Theater is uploaded via web site portal(s) to the Anti-Armor Task Force database managed in coordination with the National Ground Intelligence Center and the Joint Trauma Analysis and Prevention of Injury in Combat (JTAPIC). A repository of HS data files is being analyzed and cross referenced with information generated from Anti-Armor Incidents Reports (AAIRs). This information is being provided to the Medical Research and Material Command to support the development of a Mild Traumatic Brain Injury (mTBI) prediction model. The Army plans to procure a quantity of the Next Generation

HS in FY09 sufficient to field to six deployed BCT's. The Next Generation HS will enhance sensor performance and replace manual field operations with automated wireless techniques. These HS will support future protective helmet design efforts.

Force protection has always been in the forefront of Army transformation. The events of September 11th, 2001, refocused our efforts on tougher antiterrorism and force protection measures to insulate infrastructure, provide Soldiers with the best equipment to ensure their safety and mission success and secure homeland defense. Given the National Guard's role as both an operational force and the States' first military responder for homeland defense and civil support, the Army is committed to resource the Army National Guard consistent with those roles. The Army Reserve remains the Nation's First Title 10 responder to provide assistance in serious natural or manmade disasters, accidents, or catastrophes that occur in the United States and its territories. We are committed to ensuring that the Reserve Components are a true "Operational Reserve" -- capable not just of meeting these first responder missions, but also continuing the magnificent work that they have been doing as full partners on today's battlefields. They have proven that they are indispensable partners with the active Army in defending our Nation's interests, at home and abroad.

We must equip all units, Active and Reserve Component, with night vision goggles, crew served weapons, radios, and other critical items to survive in today's asymmetric combat environments. The Army's has institutionalized a process, called the Army Enterprise Equipping and ReUse Conference, or AEERC, that twice a year takes a focused look at all available equipment in the Army inventory, whether new or used, and develops plans to fill equipment requirements in formations from all components of the total force. Today's conferences look at virtually all actively managed Army equipment which greatly improves the early efforts of the AEERCs, which looked only at selected pieces of critically short equipment. Deliveries of equipment to the ARNG and USAR are projected to provide significant increases in both their overall equipping levels and in the percentage of that equipment which is amongst the Army's most modern. The Army is also making extraordinary efforts to ensure transparency in how we acquire, distribute, and manage equipment for the Reserve Components.

As we look to Fiscal Year 2010 and beyond, we must fully resource the Army to modernize and transform to meet the challenges of the future. Our need for continued Congressional support is vital. Soldier survivability has increased dramatically with the provision of force protection solutions. We need your continued help in two areas: the provision of predictable, sufficient and stable funding and the continued support of American industry. Predictable budgets allow us to generate efficiencies when working with industry, to provide stability to our work force, and to save dollars in the procurement process. Sufficient budgets provide the financial resources needed to meet the missions we are being asked to do as well as the resources needed to restructure, reposition, and equip the force for the next mission. Stable budgets allow us to manage our resources within a predictable band as envisioned through our planning and programming processes as well as provide needed flexibility to respond to evolving operational needs, thereby enabling us to rapidly develop and field new equipping solutions.

On behalf of Secretary Geren and General Casey, we thank the Members of the Committee for their continued, outstanding support to the men and women in uniform who make up our great Army. Your concern, resolute action and deep commitment to America's sons and daughters are widely recognized throughout the ranks of our Service. As we operate in the eighth year of this war, the brave men and women who willingly place themselves in harm's way, tour after tour, deserve nothing less than the best our nation has to offer. Our Army is the dominant land campaign force for our combatant commanders transforming to meet present and future threats, resetting to sustain a high operational tempo and leading the most radical change of its institutional and training base since World War II. Today, our All-Volunteer Force, with nearly 700,000 Soldiers on active duty from all components, is providing forces and capabilities for Operation Iraqi Freedom, Operation Enduring Freedom and other global requirements. American Soldiers, adaptive, competent and infused with the Army's values and warrior culture, continue to perform magnificently as they fight and win our Nation's wars. As we move forward, the Soldier remains the Strength of the Nation.